

## **Chapter 3.6. Periodic Smoke Inspections of Heavy-Duty Diesel-Powered Vehicles**

### **§ 2190. Vehicles Subject to the Periodic Smoke Inspection Requirements**

These regulations shall be applicable, operative July 1, 1998, as follows:

- (a) Except as provided in subsections (b), (c), (d), (e) and (f), the requirements of this chapter apply to all heavy-duty diesel-powered vehicles with gross vehicle weight ratings of greater than 6,000 pounds which operate on the streets or highways within the State of California.
- (b) Heavy-duty diesel-powered vehicles which are not part of a fleet or are employed exclusively for personal use are excluded from the requirements of this chapter.
- (c) Heavy-duty diesel-powered vehicles which are registered under the International Registration Plan as authorized by Article 4 (commencing with section 8050), Chapter 4, Division 3 of the Vehicle Code and which have established a base state other than California (non-California based vehicles) are excluded from the requirements of this chapter.
- (d) Heavy-duty diesel-powered vehicles which operate in California under the terms of Interstate Reciprocity Agreements as authorized by Article 3 (commencing with section 8000), Chapter 4, Division 3 of the Vehicle Code and which belong to fleets that are not based in California are excluded from the requirements of this chapter.
- (e) Heavy-duty diesel-powered vehicles operating in California under the terms of any other apportioned registration, reciprocity, or bilateral prorate registration agreement between California and other jurisdictions and which belong to fleets that are not based in California are excluded from the requirements of this chapter.
- (f) Heavy-duty diesel-powered vehicles operating in California under short-term vehicle registrations or permits of 90 days or less (including but not limited to 90-day temporary registrations and 4-day permits under Vehicle Code section 4004) are excluded from the requirements of this chapter.

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.

## **§ 2191. Definitions.**

- (a) The definitions of this section supplement and are governed by the definitions set forth in Chapter 2 (commencing with Section 39010), Part 1, Division 26 of the Health and Safety Code. The provisions of this chapter shall also be governed by the definitions set forth in section 2180.1, Title 13, California Code Regulations including the following modifications:

- (1) "Fleet" means any group of 2 or more heavy-duty diesel-powered vehicles which are owned or operated by the same agency or entity.
- (2) "Test opacity" means the opacity of smoke from a vehicle when measured in accordance section 2193(e).

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39010, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.

## **§ 2192. Vehicle Inspection Responsibilities.**

- (a) The owner of a heavy-duty diesel-powered vehicle subject to the requirements of this chapter shall do all of the following:
- (1) Test the vehicle for excessive smoke emissions periodically according to the inspection intervals specified in section 2193(a), (b), and (c).
  - (2) Measure the smoke emissions for each test using the test procedure specified in section 2193(e).
  - (3) Record the smoke test opacity levels and other required test information as specified in section 2194.
  - (4) Have the vehicle repaired if it exceeds the applicable smoke opacity standard specified in section 2193(e).
  - (5) Record the vehicle repair information as specified in section 2194.
  - (6) Conduct a post-repair smoke test to determine if the vehicle complies with the applicable smoke opacity standard.
  - (7) Record the post-repair smoke test results as specified in section 2194.

- (8) If the vehicle does not comply with the applicable smoke opacity standard after the test required by section 2192(a)(7), make additional repairs to achieve compliance, and record the smoke test results as specified in section 2194.
- (9) Keep the records specified in section 2194 for two years after the date of inspection.
- (10) Permit an Air Resources Board inspector to review the inspection records specified in section 2194 at owner/operator designated fleet locations by appointment.

NOTE: Authority Cited. Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43016, 43018, 43701(a), and 44011.6, Health and Safety Code.

### § 2193. Smoke Opacity Inspection Intervals, Standards, and Test Procedures.

- (a) **Initial phase-in.** Vehicles which are subject to the requirements of this chapter on the operative date of these regulations shall be tested for smoke opacity (and repaired if the applicable smoke opacity standard is exceeded) in accordance with the requirements of section 2192 pursuant to the applicable following schedule:
  - (1) Fleets of five or more vehicles subject to this chapter:
    - (A) At least 25 percent of the fleet's vehicles within 180 calendar days of the effective date of these regulations;
    - (B) At least 50 percent of the fleet's vehicles within 270 calendar days of the effective date of these regulations;
    - (C) At least 75 percent of the fleet's vehicles within 365 calendar days of the effective date of these regulations; and,
    - (D) The fleet's remaining vehicles no later than 455 calendar days after the effective date of these regulations.
  - (2) For fleets of 2 to 4 vehicles, at least one vehicle must be tested in the initial 180 day period, and in each subsequent 90 calendar day period, until all vehicles in the fleet have been tested.
- (b) **New fleets.** Fleets which first become subject to the requirements of this chapter subsequent to the effective date of these regulations must be tested in accordance with section 2192 within the applicable time intervals reflected in subsection (a) above, beginning on the date the fleet becomes subject to these regulations.

- (c) **Annual testing.** Once a vehicle subject to the requirements of this chapter has been tested in accordance with subsection (a) or (b), or has been acquired by a fleet owner after the effective date of these regulations, the vehicle must periodically be tested for smoke opacity (and repaired if the applicable smoke opacity standard is exceeded) in accordance with the requirements of section 2192 within 12 months of the previous test conducted under this section 2193.
- (d) **Exemption for vehicles powered by 1994 or subsequent model-year engines.** Any heavy-duty vehicle powered by a 1994 or subsequent model-year engine is exempt from the testing requirements of this section until January 1 of the calendar year that is four years after the model year of the engine, and is to be treated as having been acquired by the owner on that January 1. For example, a 1995 model-year engine will be exempt until January 1, 1999.
- (e) **Smoke opacity standards and test procedures.**
- (1) Except as otherwise provided in subsection (e)(2) below, the smoke opacity standards and test procedures are those specified in section 2182, Title 13, California Code of Regulations.
  - (2) Prior to July 1, 1999, if a repair facility is not equipped with an operable SAE J1667 smokemeter, vehicles may be tested at the repair facility in accordance with the smoke opacity test procedures and opacity standards set forth in section (e)(3). These are the test procedures and opacity standards originally established for the heavy-duty diesel vehicle roadside inspection program in 1991.
  - (3) **Optional smoke opacity test procedures and standards prior to July 1, 1999.**
    - (A) **Standards.**
      1. The maximum smoke opacity standard for a 1991 or subsequent model-year heavy-duty diesel-powered vehicle with a Federal peak smoke engine certification level of 35 percent peak opacity or less is 40 percent when tested in accordance with section 2193(e)(3)(B) and (C).
      2. The maximum smoke opacity standard for any other heavy-duty diesel-powered vehicle is 55 percent when tested in accordance with section 2193(e)(3)(B) and (C).
      3. The above standards do not apply to an engine exempted under section 2182(b).

(B) **Equipment.** The smoke opacity measurement equipment shall consist of a light extinction type smoke meter which includes an optical detection unit, a control/indicator unit, and a strip chart recorder.

1. The smoke meter shall comply with the specifications provided in the Society of Automotive Engineers (SAE) procedure J1243, "Diesel Emission Production Audit Test Procedure," May 1988, which is incorporated herein by reference, section 7.4 and shall be calibrated according to specifications in SAE procedure J1243, section 8.2.
2. The strip chart recorder shall comply with specifications in SAE procedure J1243, section 7.5, subsections 1-4 (May 1988).

(C) **Procedure.** The test procedure shall consist of preparation, preconditioning, and test phases:

1. In the preparation phase, the vehicle shall be placed at rest, the transmission shall be placed in neutral, and the vehicle wheels shall be properly restrained to prevent any rolling motion.
2. In the preconditioning phase, the vehicle shall be put through a snap-idle cycle two or more times until two successive measured smoke levels are within ten (10) opacity percent of each other. The smoke meter shall be rechecked prior to the preconditioning sequence to determine that its zero and span setting are adjusted according to specifications in SAE procedure J1243, section 8.1 (May 1988).
3. In the test procedure phase, the vehicle shall be put through the snap-idle cycle three times.
4. The opacity shall be measured during the preconditioning and test phases with a smoke meter and shall be recorded continuously on the chart recorder during each snap-idle cycle. The maximum instantaneous value recorded by the chart recorder shall be the opacity reading.
5. The test opacity to determine the compliance with (A)1. and (A)2. above shall be the average of the two meter readings with the least difference in opacity values. If all three readings have successive equivalent differences between them, the test opacity shall be the average of the three readings.

NOTE: Authority Cited: Sections 39600, 39601, 43013, 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43013, 43018, 43701(a), and 44011.6, Health and Safety Code.

#### **§ 2194. Record Keeping Requirements.**

- (a) The owner of a vehicle subject to the requirements of this chapter shall record the following information when performing the smoke opacity testing:
- (1) The brand name and model of the opacity meter.
  - (2) The brand name and model of the strip chart recorder, if an SAE J1243 type smoke meter is employed.
  - (3) The dates of last calibration of the opacity meter and chart recorder.
  - (4) The name of the smoke meter operator who conducted the test.
  - (5) The name and address of the contracted smoke test facility or vehicle repair facility that conducted the test (if applicable).
  - (6) The applicable smoke opacity standard for the tested vehicle.
  - (7) Vehicle identification number, vehicle's engine year, engine make, and engine model, and test date. Fleet-designated vehicle identification numbers are also acceptable.
  - (8) The initial smoke test opacity levels (for three successive test readings).
  - (9) An indication of whether the vehicle passed or failed the initial smoke test.
  - (10) The post-repair test date.
  - (11) The post-repair smoke test opacity levels (for three successive test readings).
  - (12) An indication of whether the vehicle passed or failed the post-repair smoke test.
  - (13) For vehicles that have failed the smoke test and have been repaired, the vehicle repair information specified in section 2186(a), Title 13, California Code of Regulations.

NOTE: Authority Cited: Sections 39600, 39601, and 43701(a), Health and Safety Code. Reference: Sections 39002, 39003, 39033, 43000, 43018, 43701(a), and 44011.6, Health and Safety Code.